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KEVIN G. MIERZWA
ARTZ & ARTZ, P.C.
28333 TELEGRAPH ROAD, SUITE 250
SOUTHFIELD, MI 48034

EXAMINER	
NGUYEN, HUNG T	
ART UNIT	**PAPER NUMBER**
2636	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/604,801	RAO ET AL.	
	Examiner	Art Unit	
	Hung T. Nguyen	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-20* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 & 5-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (U.S.5,646,613) in view of Stopczynski (U.S. 6,519,519) further in view of Breed (U.S. 6,749,218).

Regarding claim 1, Cho discloses a collision system [figs.1-6, 13, col.3, lines 21-46, col.4, line 48-61 and col.7, lines 4-28] comprising:

- radars (12) for detecting a collision with objects such as pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [figs.1-6, 13, col.4, line 48 to col.5, line 20 and col.7, lines 4-28];
- a controller in a form of CPU (18) communicates with the radars (12) as object classification for detecting (12) the objects such as pedestrian (50), dog (52), ball (54), tree (58) , vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags

(14) in the front (10A) & around of the vehicle [figs.3-4, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

The reference of Cho does not mention a countermeasure component is used in the collision system and inflation rate of the external airbag as claimed by the applicant.

However, The Cho does teach the controller in a form of CPU (18) communicates with the radars (12) as object classification for detecting (12) the objects such as pedestrian (50), dog (52), ball (54), tree (58), vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle at rate of 1 to 1,000,000,000 samples per second is processed by a computer to determined the time of an imminent collision [figs.3-4, col.3, lines 21-46, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

Furthermore, Stopczynski teaches a countermeasure device (26) is used in the automobile vehicle (12) as measuring and activating the airbag system [figs.1-3, col.6, lines 1-13 and col.7, lines 48-59].

Finally, Breed teaches externally deployed airbag system for vehicle contains a variable inflation rates as first inflation rate (510) and second inflation rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a pedestrian's or other object's impact against the vehicle based on data obtained prior to the crash [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Stopczynski and Breed includes inflation rate features in the system of Cho to

determine the accurate signal and deployment the external airbag based on type and orientation of the target object.

Regarding claims 2-3, Cho discloses the radars (12) is communicating with the controller (18) / CPU for detecting a collision with objects as to recognize a pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) includes their speed & distance signal as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [figs.1-6, 13, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

Regarding claims 5-6, Cho discloses the radars (12) is communicating with the controller (18) / CPU for detecting a collision with objects as to recognize a pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) includes their speed & distance signal as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [fig.13, col.7, lines 4-28].

Regarding claims 7-9, Cho discloses the radars (12) is communicating with the controller (18) / CPU for detecting a collision with objects as to recognize a pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) includes their speed & distance signal as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [fig.13, col.7, lines 4-28] and

Breed teaches externally deployed airbag system contains a variable inflation rates as first inflation rate / low rate (510) and second inflation rate / high rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a pedestrian's or other

object's impact against the vehicle based on data obtained prior to the crash as the second inflation rate **greater than** the first inflation rate [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Regarding claims 10-12, Cho discloses the radars (12) is communicating with the controller (18) / CPU for detecting a collision with objects as to recognize a pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) includes their speed & distance signal as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [fig.13, col.7, lines 4-28].

Regarding claim 13, Cho discloses a method of collision [figs.1-6, 13, col.3, lines 21-46, col.4, line 48-61 and col.7, lines 4-28] comprising:

- radars (12) for detecting a collision with objects such as pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [figs.1-6, 13, col.4, line 48 to col.5, line 20 and col.7, lines 4-28];
- a controller in a form of CPU (18) communicates with the radars (12) as object classification for detecting (12) the objects such as pedestrian (50), dog (52), ball (54), tree (58) , vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [figs.3-4, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

The reference of Cho does not mention a countermeasure component is used in the collision system and inflation rate of the external airbag as claimed by the applicant.

However, The Cho does teach the controller in a form of CPU (18) communicates with the radars (12) as object classification for detecting (12) the objects such as pedestrian (50), dog (52), ball (54), tree (58), vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle at rate of 1 to 1,000,000,000 samples per second is processed by a computer to determined the time of an imminent collision [figs.3-4, col.3, lines 21-46, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

Furthermore, Stopczynski teaches a countermeasure device (26) is used in the automobile vehicle (12) as measuring and activating the airbag system [figs.1-3, col.6, lines 1-13 and col.7, lines 48-59].

Finally, Breed teaches externally deployed airbag system for vehicle contains a variable inflation rates as first inflation rate (510) and second inflation rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a pedestrian's or other object's impact against the vehicle based on data obtained prior to the crash [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Stopczynski and Breed includes inflation rate features in the system of Cho to determine the accurate signal and deployment the external airbag based on type and orientation of the target object.

Regarding claim 14, Breed teaches externally deployed airbag system for vehicle contains a variable inflation rates as first inflation rate / low rate (510) and second inflation rate / high rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a pedestrian's or other object's impact against the vehicle based on data obtained prior to the crash [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Regarding claims 15-18, Cho discloses the radars (12) is communicating with the controller (18) / CPU for detecting a collision with objects as to recognize a pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56) includes their speed & distance signal as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [fig.13, col.7, lines 4-28] and

Breed teaches externally deployed airbag system for vehicle contains a variable inflation rates as first inflation rate (510) and second inflation rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a pedestrian's or other object's impact against the vehicle based on data obtained prior to the crash [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Regarding claims 19-20, Cho discloses a method of collision [figs.1-6, 13, col.3, lines 21-46, col.4, line 48-61 and col.7, lines 4-28] comprising:

- radars (12) for detecting a collision with **objects such as pedestrian (50), dog (52), ball (54), tree (58) vehicle, wall or pole (56)** as preventing the damage to the vehicle and the objects as

activating external airbags (14) in the front (10A) & around of the vehicle [figs.1-6, 13, col.4, line 48 to col.5, line 20 and col.7, lines 4-28];

- a controller in a form of CPU (18) communicates with the radars (12) as **object classification for detecting (12) the objects such as pedestrian (50), dog (52), ball (54), tree (58)** , vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle [figs.3-4, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

The reference of Cho does not mention a countermeasure component and at least two inflation rate of the airbags are used in the collision system as claimed by the applicant.

However, The Cho does teach the controller in a form of CPU (18) communicates with the radars (12) as object classification for detecting (12) the objects such as **pedestrian (50), dog (52), ball (54), tree (58),** vehicle, wall or pole (56) as preventing the damage to the vehicle and the objects as activating external airbags (14) in the front (10A) & around of the vehicle at rate of 1 to 1,000,000,000 samples per second is processed by a computer to determined the time of an imminent collision [figs.3-4, col.3, lines 21-46, col.4, line 48 to col.5, line 20 and col.7, lines 4-28].

Furthermore, Stopczynski teaches a countermeasure device (26) is used in the automobile vehicle (12) as measuring and activating the airbag system [figs.1-3, col.6, lines 1-13 and col.7, lines 48-59].

Finally, Breed teaches externally deployed airbag system for vehicle contains a variable inflation rates as first inflation rate / low rate (510) and second inflation rate / high rate (520) for inflating the airbags independently outside the vehicle which can be deployed to cushion a

pedestrian's or other object's impact against the vehicle based on data obtained prior to the crash as the second inflation rate **greater than** the first inflation rate [figs.5, 14-16, col.20, lines 29-61 and col.24, lines 35-55].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Stopczynski and Breed includes inflation rate features in the system of Cho to determine the accurate signal and deployment the external airbag **based on type and orientation of the target object as small animal or vehicle or human being and etc.**

Allowable Subject Matter

3. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Arguments & Responses

4. Applicant's argument filed on Dec. 21, 2004 have been fully considered but they are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (571) 271-2982. The examiner can normally be reached on Monday to Friday from 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffery can be reached on (571) 272-2981. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Examiner: Hung T. Nguyen

Date: Mar. 15, 2005